

CLAIMS:

1. Method for measuring a color temperature (T_C) of a light source (2),
comprising the steps of:
 - measuring the partial intensity (B) of a predefined spectral region narrower
than the visible range;
 - 5 measuring the total intensity (V) in the visible range; and
 - calculating a ratio (B/V) of said partial intensity (B) to said total intensity (V)
as representing the color temperature (T_C).
2. Method according to claim 1, wherein the color temperature (T_C) is calculated
10 on the basis of a predetermined relationship between the color temperature (T_C) and said ratio
(B/V).
3. Method according to claim 1, wherein said predefined spectral region is
located in the blue part of the spectrum.
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4. Method according to claim 3, wherein said blue range extends from
approximately 380 nm to approximately 480 nm.
5. Method according to claim 1, wherein said predefined spectral region is
20 located in the red part of the spectrum.
6. Method according to claim 5, wherein said red range extends from
approximately 610 nm to approximately 760 nm.
- 25 7. Sensor assembly (20), for measuring at least one parameter, comprising:
 - a first parameter sensor (21) having at least one parameter-dependent electrical
characteristic;
 - a first diode (23) connected in series with said first parameter sensor (21).

8. Sensor assembly according to claim 7, wherein said first parameter sensor (21) is a light sensor, preferably a photo diode.
9. Sensor assembly according to claim 7, for measuring at least two parameters,
5 further comprising:
a second parameter sensor (22) having at least one parameter-dependent electrical characteristic;
a second diode (24) connected in series with said second parameter sensor (22);
10 wherein the series combination of second parameter sensor (22) and second diode (24) is connected anti-parallel to the series combination of first parameter sensor (21) and first diode (23).
10. Sensor assembly according to claim 7, wherein a free terminal of the first
15 parameter sensor (21) is coupled to a first output terminal (25);
and wherein a free terminal of the first diode (23) is coupled to a second output terminal (26).
11. Sensor assembly (20), capable of receiving light (L) from a light source (2)
20 and capable of generating a measuring signal (S(T_c)) containing information regarding the color temperature (T_C) of the light source (2);
the sensor assembly (20) comprising a first sensor (21) adapted for measuring luminance and a second sensor (22) adapted for measuring the partial intensity of a predefined spectral region narrower than the visible range.
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12. Sensor assembly according to claim 11, wherein said second sensor (22) has a sensitivity range substantially corresponding to a blue range, said second sensor (22) preferably having a peak sensitivity at approximately 440 nm.
- 30 13. Sensor assembly according to claim 11, wherein said second sensor (22) has a sensitivity range substantially corresponding to a red range, said second sensor (22) preferably having a peak sensitivity at approximately 660 nm.
14. Sensor assembly according to claim 11, designed in accordance with claim 8.

15. Switch stage (90), for cooperation with a sensor assembly according to claim 10, the switch stage comprising:

a first controllable switch (82), having a central terminal (82c) coupled to a first input (91a), having a first terminal (82a) coupled to a first reference voltage (V_{CC}), and having a second terminal (82b) coupled via a first measuring resistor (R_1) to a second reference voltage (ground) differing from the first reference voltage (V_{CC});

a second controllable switch (83), having a central terminal (83c) coupled to a second input (91b), having a first terminal (83b) coupled to a first reference voltage (V_{CC}), and having a second terminal (83a) coupled via a second measuring resistor (R_2) to a second reference voltage (ground) differing from the first reference voltage (V_{CC});

a third controllable switch (84), having a central terminal (84c) coupled to an output (99), having a first terminal (84a) coupled to the second input (91b), and having a second terminal (84b) coupled to the first input (91a).

16. Driver (10) for driving a lamp (2) with variable color temperature properties, the driver comprising:

a sensor assembly (20), capable of receiving light (L) from the light source (2) and capable of generating a measuring signal ($S(T_c)$) containing information regarding the color temperature (T_c) of the light source (2);

a controller (50), having an input (51) coupled to receive the measuring signal ($S(T_c)$) from the sensor assembly (20), and adapted to control a lamp current generating component (14; 15) on the basis of the measuring signal ($S(T_c)$).

17. Driver according to claim 16, wherein the controller is designed to keep the measuring signal ($S(T_c)$) at a desired value.

18. Driver according to claim 16, wherein the controller (50) comprises:

a divider (70) having its inputs connected for receiving a luminance signal (S_V) and an intensity signal (S_B) indicating the partial intensity (B) of a predefined spectral region narrower than the visible range;

a comparator (71) having a first input receiving an output signal (B/V) from the divider (70) and having a second input receiving a reference signal (REF_C).

19. Driver according to claim 18, further comprising a pulse generator (72) having an input receiving an output signal from the comparator (71).
- 5 20. Driver according to claim 18, comprising a sensor assembly (20) according to claim 11.
21. Driver according to claim 16, wherein the controller (50) comprises:
a comparator (60) having a first input connected for receiving a luminance signal (S_V), and
10 having a second input receiving a reference signal (REF_L).
22. Driver according to claim 16, comprising a switch stage (90) according to claim 15.
- 15 23. Driver according to claim 22, comprising a sensor assembly (20) according to claim 10.
24. Lamp system (1), comprising:
a lamp (2) with variable color temperature properties;
20 a sensor assembly according to claim 11;
a lamp driver according to claim 16.